

Date: Fri, 8 Apr 94 16:38:51 PDT
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V94 #391
To: Info-Hams

Info-Hams Digest Fri, 8 Apr 94 Volume 94 : Issue 391

Today's Topics:

6 meters
73
Any experience with doppler rdf (radio direction finders)?
baud and Byte/s
Checks, as in \$\$\$
Delivery Failure Report
help with HPIIP
how's FM broadcast for freq. standard? (3 msgs)
How phasing SSB Exciters Work (Was: RF and AF speech pr
How phasing SSB Exciters Work (Was: RF and AF speech processors)
Kudos to ARRL
Linked Repeater Help
solar charge controller
STS-59 Delay & New Keps
Two way/field programmable radios
University of Florida, Gainesville
Weather obs by packet
We wish you best 73's

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 8 Apr 94 15:23:02 GMT
From: agate!howland.reston.ans.net!europa.eng.gtefsd.com!gatech!wa4mei!ke4zv!
gary@ucbvax.berkeley.edu
Subject: 6 meters
To: info-hams@ucsd.edu

In article <060494b2206@bobsbox.rent.com> djk@bobsbox.rent.com (David Klippel) writes:

>I'm interested in trying out 6 meters but have a limited budget. Does anyone
>know of a way to easily use an IC-725 or IC-W2A to try the band out?
>Preferrably with low risk of ruining the radio.

You could build a high level transverter using *tubes*. There are designs in old Handbooks. Otherwise you're going to have to build a power attenuator to get the 725 output down to a level where it can drive available solid state transverters. (The 735 has transverter jacks, one of the reasons I chose it.)

I've seen downconverting designs for 6 meters that used a 2 meter multimode rig as the driver in some of the European manuals. That's a viable approach for *FM* with your W2A. But you probably really want SSB capability on 6.

Let me suggest that you start small. Build a receiving converter for 6 meters and listen for a while. If you like what you hear, then build a transmitting converter too.

Gary

--

Gary Coffman KE4ZV		You make it,		gatech!wa4mei!ke4zv!gary
Destructive Testing Systems		we break it.		uunet!rsiatl!ke4zv!gary
534 Shannon Way		Guaranteed!		emory!kd4nc!ke4zv!gary
Lawrenceville, GA 30244				

Date: 8 Apr 94 11:59:18 GMT

From: agate!howland.reston.ans.net!europa.eng.gtefsd.com!news.umbc.edu!eff!
news.kei.com!yeshua.marcam.com!wrdis02.robins.af.mil!apollo.robins.af.mil!
woodj@ucbvax.berkeley.edu

Subject: 73

To: info-hams@ucsd.edu

In article <CnqrBM.940@world.std.com>,
drt@world.std.com (David R Tucker) writes in part:

.
.
.

> We're not going to wipe this one out. Let's focus instead on that
> "royal we", which makes far less sense and sounds really stupid. Or
> something. Code wars. Anything.

Can anyone tell me when GHz changed pronunciation from "jiga-" to

"giga-". The oldest non-technical publication I can find that gives the "new" pronunciation is a late-sixties World Book dictionary. The only technical publications I can find that include a pronunciation are published by Howard Sams. None of the Howard Sams pubs have "giga-" as an alternate. Since I don't use gig as an abbreviation for GHz, does this mean I'm too old fashioned or stubborn? I have broken down and used meg for MHz and Mohm. Maybe I'm a hypocrite?:(

Jim, KA4GHX

Date: 8 Apr 94 22:00:21 GMT
From: unix.sri.com!headwall.Stanford.EDU!Csli!pkahn@hplabs.hp.com
Subject: Any experience with doppler rdf (radio direction finders)?
To: info-hams@ucsd.edu

I have been reading up on doppler RDF's. The Amateur Radio Handbook has an article that says they can only do well to about 5 degrees. Have you heard of systems or ways to do it that gives better results?

thanks,
phil...

Date: 8 Apr 94 15:31:34 GMT
From: agate!howland.reston.ans.net!pipex!uknet!EU.net!julienas!sophia.inria.fr!
zig.inria.fr!jmhertz@ucbvax.berkeley.edu
Subject: baud and Byte/s
To: info-hams@ucsd.edu

I'm not a "packeteer", so excuse my lack of knowledge:
Which relation exists between the units mentioned above?
Is there a factor saying how many Byte/s make one baud
or vice versa?
73 de F/DG0LFH
Jan-Martin

Date: 8 Apr 94 16:20:03 GMT
From: meaddata!ruthy@uunet.uu.net
Subject: Checks, as in \$\$\$
To: info-hams@ucsd.edu

In article <2np47d\$ps5@cville-srv.wam.umd.edu>, ham@wam.umd.edu (Scott Richard Rosenfeld) writes:

|> You know how all of these companies are willing to print your checks for you?
|> I wonder if the ARRL has any kind of similar "HAM RADIO CHECK" printing
|> service?

|>

|> And if not, why not?

|>

Maybe I'm not getting the point of this the way you intended, Scott, but why would they? The ARRL is a service organization...perhaps your idea would be best addressed by the numerous printers that do QSL printing. You are aware that check paper is usually a different type/quality. If it is a profitable idea, I'm sure someone will take the lead.

Ruthann - WD8BMK

|> Scott NF3I

|>

|> --

|> 73, _____ The

|> \ / Long Original

|> Scott Rosenfeld Amateur Radio NF3I Burtonsville, MD

| Live \$5.00

|> WAC-CW/SSB WAS DXCC - 125 QSLed on dipoles _____| Dipoles! Antenna!

Date: 8 Apr 94 20:06:23 GMT
From: news-mail-gateway@ucsd.edu
Subject: Delivery Failure Report
To: info-hams@ucsd.edu

From: NAME: Mail Postmaster
FUNC:
TEL: <POSTMASTER AT A1 AT ANDV02>
To: net%"Info-Hams@UCSD.EDU"@RCVAX@MRGATE

ALL-IN-1 was unable to deliver your message dated _____ to
ADAMS,SE - no such ALL-IN-1 account
on node ANDV02

The subject of the message was :
Info-Hams Digest V94 #390

Date: Thu, 7 Apr 1994 20:02:59 +0000

From: elroy.jpl.nasa.gov!swrinde!cs.utexas.edu!howland.reston.ans.net!pipex!demon!
kanga.demon.co.uk!dick@ames.arpa
Subject: help with HPIIP
To: info-hams@ucsd.edu

Hi gang,
I am not sure if this is the right place for
this, but I dont belong to any
non Ham groups...
I have a Hewlett Packard Laserjet IIP printer
that seems to be stuck as a serial printer
I wanna use it as a paralell printer.
any ideas, tips, suggestions please..
TTFN de Dick

Date: 8 Apr 94 19:33:19 GMT
From: dog.ee.lbl.gov!ihnp4.ucsd.edu!sdd.hp.com!col.hp.com!srngenprp!
alanb@uchvax.berkeley.edu
Subject: how's FM broadcast for freq. standard?
To: info-hams@ucsd.edu

Tom Randolph (randolph@est.enet.dec.com) wrote:

: I just acquired one of the Optoelectronics 1200 MHz handheld freq counters. In
: looking for a simple, cheap way to calibrate it, I note that it picks up the
: nearby FM broadcast station as 107.2999 MHz when I connect a rubber duck... how
: close can I assume those guys are? The way the counter is set up, the higher
: the standard freq, the better your calibration. Zero-beating WWV won't get me
: as close as something less definitive at 100 MHz or higher.
: -Tom R. N100Q randolph@est.enet.dec.com

Why not call up the broadcast station and ask them? Ask to speak to the
chief engineer.

AL N1AL

Date: 8 Apr 94 19:56:35 GMT
From: sdd.hp.com!hpscit.sc.hp.com!icon!lkraft@hplabs.hp.com
Subject: how's FM broadcast for freq. standard?
To: info-hams@ucsd.edu

Tom Randolph (randolph@est.enet.dec.com) wrote:

: >
: > I just acquired one of the Optoelectronics 1200 MHz handheld freq counters. In

: > looking for a simple, cheap way to calibrate it, I note that it picks up the
: > nearby FM broadcast station as 107.2999 MHz when I connect a rubber duck...
how
: > close can I assume those guys are? The way the counter is set up, the higher
: > the standard freq, the better your calibration. Zero-beating WWV won't get me
: > as close as something less definitive at 100 MHz or higher.

Unless someone can correct me, I believe FM broadcast is allowed
+/- 2KHz. Same for broadcast TV audio/video. AM broadcasters are
allowed +/- 20Hz. Nowadays with the availability of cheap, accurate
freq. counters I'm sure they're all much closer than this.

L

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=====
                                     Lyle Kraft                AA6LK
#####                               Hewlett-Packard
#####  /_ _ #####               System Interconnect Lab -
##### / / _/ #####              Information Networks Division
#####   / #####                Roseville, CA 95747
#####                               916-785-5798
#####                               lkraft@core.rose.hp.com
=====
```

Date: 8 Apr 94 21:08:54 GMT
From: dog.ee.lbl.gov!agate!kabuki.EECS.Berkeley.EDU!kennish@ucbvax.berkeley.edu
Subject: how's FM broadcast for freq. standard?
To: info-hams@ucsd.edu

In article <CnyI2B.2y7@icon.rose.hp.com>,
Lyle Kraft <lkraft@core.rose.hp.com> wrote:

>
> Unless someone can correct me, I believe FM broadcast is allowed
> +/- 2KHz. Same for broadcast TV audio/video. AM broadcasters are
> allowed +/- 20Hz. Nowadays with the availability of cheap, accurate
> freq. counters I'm sure they're all much closer than this.
>

The above is correct, Part 73 requires 2 KHz accuracy. However, one
must be careful in using FM broadcast. It is wideband FM, in that
Beta (deviation index) can exceed the first zero crossing of the Bessel
Function or 2.405. When that happens, the carrier can disappear, and
then reappear in inverted phase. I am not sure how your frequency
counter will react to this.

Most FM stations use a FLL to keep their transmitters on frequency by dividing their output frequency by some factor and comparing that with a known accurate lower frequency reference. Note that dividing a FM signal also divides the deviation index by the division ratio. Thus, by dividing by 5 or so, the FM signal can be guaranteed not to exceed a deviation of 2.405, and the carrier never disappears and will always be of proper phase, assuming that the signal corresponds to Part 73 standards of deviation, etc. and that "normal" signals are used to modulate the carrier.

Good luck.

Of course, if you have \$\$ you can buy a HP 5071A enhanced cesium beam standard. Accurate to at least 1 part in 10^{13} .

-Ken

Date: 8 Apr 94 19:41:25 GMT
From: sdd.hp.com!col.hp.com!srngenprp!alanb@hplabs.hp.com
Subject: How phasing SSB Exciters Work (Was: RF and AF speech pr
To: info-hams@ucsd.edu

Robert J. Kelley (pasha@netcom.com) wrote:
: alanb@sr.hp.com (Alan Bloom) writes:

: >I have often thought, though, that the Weaver method would be well-suited
: >to implementation in a DSP, since you can get mathematically perfect
: >carrier suppression.

: >AL N1AL

: Isn't this only true (mathematically perfect carrier suppression) if you
: happen to use perfect "brick wall" filters after the two Weaver mixers?

No, the carrier suppression is perfect (except for round-off error). The imperfect filtering would, however, affect the unwanted sideband suppression.

: Practically speaking, very good Hilbert transformers for the phasing method
: can be implemented with DSP's nowadays. My question is, which of the two
: methods uses the least amount of DSP power for the same level of performance?

The Weaver method only requires a couple multiply operations per sample to generate the audio 90 degree phase shift. I'm not familiar with Hilbert transform approximation algorithms, but I gotta believe they are more complicated than that.

AL N1AL

Date: 8 Apr 94 19:25:35 GMT
From: sdd.hp.com!col.hp.com!srngenprp!alanb@hplabs.hp.com
Subject: How phasing SSB Exciters Work (Was: RF and AF speech processors)
To: info-hams@ucsd.edu

Wayne Covington (wayne@fc.hp.com) wrote:
: tomb@lsid.hp.com wrote:

: Suppose the system has been realized with a conventional all-pole bandpass
: filter such as Chebychev or Butterworth for the amplitude shaping, followed
: by all-pass networks to flatten the system's group delay and get the
: 90-degree phase difference. The 90-degree phase difference and flatness of
: group delay are just within certain tolerances.

: Now you decide to improve the amplitude response (better shape factor) by
: changing the bandpass filter to the elliptic version, with the same number
: of poles but additional jw-axis zeros. You try to readjust the all-pass
: networks to restore the flat group delay and the 90-degree phase difference
: to within the original tolerances.

: My conjecture is that this cannot be done without adding more all-pass
: pole-zero pairs. If the group delay is within tolerance, the 90-degree
: phase difference isn't, or vice-versa.

So long as the additional filtering is done to both channels identically,
the phase and amplitude matching between the two channels is not affected.

AL N1AL

Date: Thu, 7 Apr 1994 20:52:42 GMT
From: news.crd.ge.com!crd.ge.com!mallick@uunet.uu.net
Subject: Kudos to ARRL
To: info-hams@ucsd.edu

Yesterday a I received a packet from the ARRL telling me that
my license was scheduled to expire of a certain date. They explained
the FCC rules for renewal and gave a typical renewal time. Included
were the FCC 610 form and an envelope pre-addressed to the FCC! Way to
go, ARRL! Very nice, thoughtful, helpful, and much better than the
"scare tactic, send us \$5" of the W5YI group.

Keep up the good work!

--

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..... ..
John A. Mallick WA1HNL                      E-mail: mallick@crd.ge.com
GE Corporate Research and Development        Phone: (518)-387-7667 (W)
Schenectady, NY 12301                      FAX:   (518)-387-6560 (W)
..... ..
```

"Work like hell. Tell everyone everything you know. Close a deal
with a handshake. Have fun." --- "Doc" Edgerton

Date: 8 Apr 94 02:23:43 GMT
From: agate!howland.reston.ans.net!pipex!uknet!demon!mailhost.interaccess.com!
interaccess.com!hopken@ucbvax.berkeley.edu
Subject: Linked Repeater Help
To: info-hams@ucsd.edu

Hi. I need to talk with someone who is knowledgeable in the techniques used
to link 2 or more repeaters together. Something like the "Mighty 5.25" system
in Indianapolis. If you have some knowledge of this sort of thing, please
leave me a message (email) and I'll be a little more specific about our
needs. This is for a Red Cross communications project.
Tnx for your help...

--

```
=====
Ken Hopkins WA9WCP | Internet - HOPKEN@interaccess.com
Disaster Team -    | AMPRnet - 44.72.1.162
American Red Cross | AX.25 - WA9WCP@W9ZMR.IL.USA
```

Date: 8 Apr 94 05:29:02 GMT
From: agate!howland.reston.ans.net!news.intercon.com!news1.digex.net!access3!
bote@ucbvax.berkeley.edu
Subject: solar charge controller
To: info-hams@ucsd.edu

ralph.ward@pubcon.com (Ralph Ward) writes:
>anybody have plans or ideas for a really cheap, simple charge controller
>for solar panels...(charging 12v lead acid cells).

I would think that the diurnal solar cycle would be
a pretty good start. +/- 12 hours of charge and +/- 12 hours
of no charge. This works OK on a very remote receiver
we have powered by two car batteries and a solar array.

>also looking for a good source for amorphous photovolataic panels.....
>thanks

I got a card from a guy at the Timonium, MD hamfest
last week...which I seem to have as quickly misplaced.
Search results negative.

The guy's last name was Howell and he seemed to
know what he was talking about. If someone knows
who this is, please tell Ralph unless I find it
first. Does that make sense?

--

rec.nude: your exit to good living along the Information Toll Road.
finger bote@access.digex.net for PGP key and an operator will help you.
How 'bout them Os!!

Date: 8 Apr 94 20:18:37 GMT
From: news-mail-gateway@ucsd.edu
Subject: STS-59 Delay & New Keps
To: info-hams@ucsd.edu

SB SAREX @ AMSAT STS-59.003
STS-59 Delay & New Keps

Greenbelt, MD April 8, 1994 at 20:00 UTC

The STS-59 launch, orginally scheduled for today, has been postponed until
tomorrow, April 9 at 11:05 UTC. A new set of Keplerian elements, provided
by Gil Carman, WA5NOM, follow:

STS-59
1 00059U 94099.70641906 .00221188 00000-0 11303-3 0 93
2 00059 57.0053 262.7355 0009259 269.9963 90.0094 16.19806752 57

Satellite: STS-59
Catalog number: 00059
Epoch time: 94099.70641906 = (09 APR 94 16:57:14.61 UTC)
Element set: 009
Inclination: 57.0053 deg
RA of node: 262.7355 deg Space Shuttle Flight STS-59
Eccentricity: .0009259 Prelaunch Element set JSC-009
Arg of perigee: 269.9963 deg Launch: 09 APR 94 11:05 UTC
Mean anomaly: 90.0094 deg
Mean motion: 16.19806752 rev/day G. L. Carman

Decay rate: 2.21188e-03 rev/day^2 NASA Johnson Space Center
Epoch rev: 5
Checksum: 321

Submitted by Frank H. Bauer, KA3HDO for the SAREX Working Group

/EX

Date: 7 Apr 1994 18:27:15 GMT
From: mozz.unh.edu!christa.unh.edu!ckf@uunet.uu.net
Subject: Two way/field programmable radios
To: info-hams@ucsd.edu

I was wondering if anyone out there could email me or post the general FCC rules regarding two way/field programmable radio use, or some general FCC rules that cover many areas. I know it would be a lot to ask, but any info. would be great.

Date: 8 Apr 94 17:01:23 GMT
From: agate!howland.reston.ans.net!gatech!mailer.acns.fsu.edu!
freenet3.scri.fsu.edu!freenet3.scri.fsu.edu!not-for-mail@ucbvax.berkeley.edu
Subject: University of Florida, Gainesville
To: info-hams@ucsd.edu

I was in Gainesville last Monday. It is a nice clean college town and a great place to party. The beach is about 1.5 hrs away in St. Augustine. The summer wx in this part of the world is brutal. July and August highs are typically in the mid-90's with humidities to match. Still, there are worse places to spend a summer. Just be prepared for the humidity.

By the way, why would anyone want to spend the summer as a Gator when everyone knows the world revolves around the Seminoles at FSU??

I did not have a 2M rig with me so I can't tell you about activity in Gainesville.

Enjoy the summer and look me up when you come through.

73 's es
see ya'

de N5HF

Date: 8 Apr 94 22:02:46 GMT
From: dog.ee.lbl.gov!agate!news.Brown.EDU!noc.near.net!news.delphi.com!
pschou@ucbvax.berkeley.edu
Subject: Weather obs by packet
To: info-hams@ucsd.edu

The APRSxxx.exe program by WB4APR has an interface for the Ultimeter II weather station. It will show weather data as well as a lot of other stuff on a scalable map display. It has a GPS/LORAN interface and DF displays. It's available on the ARN BBS at 410 280-2503 and at some of the Ham FTP sites. APRS btw stands for Automatic Position Reporting System. 73

Internet: pschou@delphi.com		RIME ->CHESSIE
Packet: ke6et@ka3rfe.md.usa.noam		FIDO 1:261/1063
ARN BBS 410 280-2503		3856.00N 07629.79W

Date: 8 Apr 94 17:03:16 GMT
From: agate!howland.reston.ans.net!gatech!newsxfer.itd.umich.edu!
news1.oakland.edu!vela.acs.oakland.edu!prvalko@ucbvax.berkeley.edu
Subject: We wish you best 73's
To: info-hams@ucsd.edu

hahahahaha

Heard on the repeater, "You are full scale but really noisy."

=paul= wb8zjl

Date: Thu, 7 Apr 94 20:13:35 GMT
From: sgiblab!uhog.mit.edu!xn.ll.mit.edu!ll.mit.edu!fcr@ames.arpa
To: info-hams@ucsd.edu

References <brett_miller.86.0013656E@ccm.hf.intel.com>,
<9404012250592.DLITE.gilbaronw@delphi.com>, <hM-vhfu.eraybould@delphi.com>≥Ù
Subject : Re: Supermorse under windows.?

In article <hM-vhfu.eraybould@delphi.com> Ned Raybould <eraybould@delphi.com>
writes:

(edited by fcr)

>If you have a modem dial up the ARRL BBS at 203-666-0578 (300-14400, N81), and
>download SM410.ZIP or FTP from oak.oakland.edu.

^^^

>

The key to getting SM to operate under windows is to get the latest version.
I downloaded it around January from wuarchive.wustl.edu, and recently got
the Chestnut Ham Radio CD-Rom. In both cases, the version was 3.16.
I downloaded 4.1, and it worked fine. After playing with it for a few
minutes, I found that the latest release appears much improved in the user
interface.

Thanks all,

Frank Robey
N1PKT

End of Info-Hams Digest V94 #391
